DOCUMENT RESUME

ED 225 340 EC 151 002

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TITLE Interactions between Teachers and Learning Disabled and Non-Learning Disabled Adolescents.
INSTITUTION Kansas Univ., Lawrence, Inst. for Research in Learning Disabilities.
SPONS AGENCY Bureau of Education for the Handicapped (DHEW/OE), Washington, D.C.
REPORT NO IRLD-44
PUB DATE Apr 81
CONTRACT 300-77-0494
NOTE 33p.
PUB TYPE Reports - Research/Technical (143)

EDRS PRICE MF01/PC02 Plus Postage.
DESCRIPTORS Classroom Observation Techniques; *Interaction; *Learning Disabilities; Secondary Education; *Student Teacher Relationship

ABSTRACT

An observational measurement system was used to examine the interaction of 14 learning disabled (LD) students (12-15 years old) and their teachers. Interactions were compared with those of 16 non LD students (12-16 years old). It was hypothesized that LDs would have fewer interactions with their teachers and that the proportion of negative interactions would be greater. Measurement systems included a behavioral observation system and the Teacher Approval Disapproval Scale (TADS), a questionnaire completed by LD and non LD Ss. Contrary to the hypothesis, no major differences were found between the student-teacher interactions of LD and non LD Ss. Results from the TADS did not support the contention in the literature that there are social perception differences between LD and non LD students. (CL)

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ED225340

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Emphasis on Adolescents and Young Adults

INTERACTIONS BETWEEN TEACHERS AND LEARNING DISABLED AND NON-LEARNING DISABLED ADOLESCENTS

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EC151002

Research Report No. 44
April, 1981

The University of Kansas Institute for Research in Learning Disabilities is supported by a contract (#300-77-0494) with the Bureau of Education for the Handicapped, Department of Health, Education, and Welfare, U. S. Office of Education, through Title VI-G of Public Law 91-230. The University of Kansas Institute, a joint research effort involving the Department of Special Education and the Bureau of Child Research, has specified the learning disabled adolescent and young adult as the target population. The major responsibility of the Institute is to develop effective means of identifying learning disabled populations at the secondary level and to construct interventions that will have an effect upon school performance and life adjustment. Many areas of research have been designed to study the problems of LD adolescents and young adults in both school and non-school settings (e.g., employment, juvenile justice, military, etc.)

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The preparation of this document was supported by a government contract. The views expressed here are those of the Institute, and do not necessarily reflect official positions of the Bureau of Education for the Handicapped, DHEW, USOE.

COOPERATING AGENCIES

Were it not for the cooperation of many agencies in the public and private sector, the research efforts of The University of Kansas Institute for Research in Learning Disabilities could not be conducted. The Institute has maintained an on-going dialogue with participating school districts and agencies to give focus to the research questions and issues that we address as an Institute. We see this dialogue as a means of reducing the gap between research and practice. This communication also allows us to design procedures that: (a) protect the LD adolescent or young adult, (b) disrupt the on-going program as little as possible, and (c) provide appropriate research data.

The majority of our research to this time has been conducted in public school settings in both Kansas and Missouri. School districts in Kansas which have or currently are participating in various studies include: Unified School District USD 384, Blue Valley; USD 500, Kansas City, Kansas; USD 469, Lansing; USD 497, Lawrence; USD 453, Leavenworth; USD 233, Olathe; USD 305, Salina; USD 450, Shawnee Heights; USD 512, Shawnee Mission; USD 464, Tonganoxie; USD 202, Turner; and USD 501, Topeka. Studies are also being conducted in several school districts in Missouri, including Center School District, Kansas City, Missouri; the New School for Human Education, Kansas City, Missouri; the Kansas City, Missouri School District; the Raytown, Missouri School District; and the School District of St. Joseph, St. Joseph, Missouri. Other participating districts include: Delta County, Colorado School District; Montrose County, Colorado School District; Elkhart Community Schools, Elkhart, Indiana; and Beaverton School District, Beaverton, Oregon. Many Child Service Demonstration Centers throughout the country have also contributed to our efforts.

Agencies currently participating in research in the juvenile justice system are the Overland Park, Kansas Youth Diversion Project, and the Douglas, Johnson, Leavenworth, and Sedgwick County, Kansas Juvenile Courts. Other agencies which have participated in out-of-school studies are: Penn House and Achievement Place of Lawrence, Kansas; Kansas State Industrial Reformatory, Hutchinson, Kansas; the U. S. Military; and Job Corps. Numerous employers in the public and private sector have also aided us with studies in employment.

While the agencies mentioned above allowed us to contact individuals and support our efforts, the cooperation of those individuals--LD adolescents and young adults; parents; professionals in education, the criminal justice system, the business community, and the military--have provided the valuable data for our research. This information will assist us in our research endeavors that have the potential of yielding greatest payoff for interventions with the LD adolescent and young adult.

Abstract

A number of recent studies with learning disabled children have suggested that they may have poor social skills; however, research with LD adolescents in school settings has reported few differences in LD and non-LD student-teacher interactions. In this study, an observational measurement system was used to examine interactions of LD students and their teachers and to compare these interactions with those of their normal peers. The students' perceptions of their classroom interactions were also assessed.

No significant differences between LD student-teacher and NLD student-teacher interactions were observed. In addition, LD and NLD students exhibited similar perceptions of their interactions with their teachers.

INTERACTIONS BETWEEN TEACHERS AND LEARNING DISABLED AND NON-LEARNING DISABLED STUDENTS

The identification of learning disabled (LD) youths typically has involved the use of criteria related to their cognitive and perceptual dysfunctions. Social dysfunctions are infrequently acknowledged as a salient characteristic of their behavior or an explicit dimension of their identification (Schroeder, Schroeder, & Davine, 1978; Vaughan & Hodges, 1973). Recently, however, a number of studies have suggested that learning disabled students may have trouble establishing rewarding social relationships with adults and peers.

Early research in the area of social skills deficits of LD students employed rating scales to compare LD and non-learning disabled (NLD) elementary students. When LD students were rated by adults, negative evaluations were typically given by both parents and teachers. Parents of LD students found them to be more inconsiderate, more lacking in affection, and more emotionally unreceptive than NLD youths (Strag, 1972). Teachers preferred the LD student less (Bryan, 1978; Lyon, 1977) and saw these students as having more severe emotional and behavioral problems than NLD students (Keogh, Tchir, & Windeguth-Behn, 1974; McCarthy & Paraskevopoulos, 1969). Many of the poor adult-LD child interactions also seem to be present in the interactions between LD students and their peers (Bryan, 1974a, 1976).

One contributing factor to these poor interactions is the learning disability label itself. Foster, Schmidt, and Sabatino (1976) suggested that the learning disability label leads to negative expectations from the teachers. Jacobs (1978) found that LD children were rated more negatively by teachers as a result of their label and that the label affected the teacher's ability to perceive accurately the behavior of the LD student. Due to the biases produced by the learning disability label, the rating studies may not provide an accurate

description of the actual skill deficits of the LD student. The rating-scale studies could not specify the areas of difficulty, only that the LD student was not as popular as his/her normal peers.

Recent behavior observation studies have suggested that LD students may, in fact, have some social skills deficiencies. These studies are more reflective of the actual problem and more specific as to where the deficit may lie. In general, the LD student has difficulty establishing friendships and eliciting positive responses (Bryan, 1978) and is less socially acceptable (Bruininks, 1978). In observing student-teacher interactions in the classroom, several researchers have found that the LD student is less attentive and less task-oriented (Bryan, 1974b; Bryan & Wheeler, 1972; Forness & Esveldt, 1975). Also, the teacher is more likely to respond negatively to the LD student (Bryan, 1974a) or not respond at all (Forness & Esveldt, 1975).

Bryan and Pflaum (1978), in their work with peer interactions, suggested that a possible cause of these poor interactions is the LD child's inability to communicate adequately. The LD child's verbal communication ability has been shown to lead to social rejection (Bryan & Bryan, 1978). LD students emit more competitive statements to others, while NLD students give more consideration statements (Bryan, Wheeler, Felcan & Henek, 1976). LD students are also inadequate listeners and thus do not seek to clarify communication problems when they arise (Bryan, Donahue, & Pearl, 1980).

Another potential cause of these social problems may be the child's inability to discriminate social cues. Teachers were found to emit more negative non-verbal behavior in reaction to LD students (Lyon, 1977); LD students, however, are less accurate than NLD students in comprehending non-verbal communications (Bryan, 1977). Thus, it is conceivable that the students do not understand the need to alter their behavior. In fact, LD students rate themselves as more

liked by their teachers and peers than is actually the case (Bruininks, 1978), suggesting that their perceptions may not be accurate.

The preponderance of research suggests that LD students have problems relating to their teachers and are simply not reinforcing to work with. Two major studies, however, have recently reported no differences in interactions between LD and NLD adolescents and their teachers (Schumaker, Sheldon-Wildgen & Sherman, 1980; Skrtic, 1980). In these studies, only general behavior patterns were observed and such items as specific contents of statements went unrecorded. It may be that the codes were not sensitive to the problem areas. Also, these studies observed LD adolescents while previous research dealt primarily with elementary-aged children. It is possible that LD children "catch up" with their normal peers in social skills by the time they reach junior high school. These results, nonetheless, are surprising in light of previous research, though a few other isolated studies have reported no LD-NLD differences on such measures as total number of student-teacher interactions (Bryan & Wheeler, 1972) and time spent in interactions (Bryan, 1974a). In addition, Rickey and McKinney (1978) found that LD and NLD samples could not be differentiated on the basis of social skill differences, but only in terms of their levels of distractability. These negative results deserve careful replication. The study reported here attempts to do this.

In the study reported here, an observational measurement system was used to examine the interactions of LD students and their teachers and to compare these interactions to those of their normal peers. It was hypothesized that the LD students would have fewer interactions with their teachers and that the proportion of negative interactions would be greater. Based on previous research, it also seemed important to assess the students' perceptions of their interactions in the classroom.

METHOD

Setting

The research was conducted in a suburban junior high school in a moderate-size (population 125,000) midwestern city. All observational data were collected in ten regular classrooms. The classes included: (a) six math classes, (b) two reading classes, and (c) two science classes. The average class size was 22 students; the length of the class periods was 50 minutes.

Subjects

Participants in this study included: (a) 16 learning disabled (LD) male adolescents, (b) 16 non-learning disabled (NLD) adolescents matched with the LD students on the basis of age and sex, and (c) eight regular classroom teachers of these 32 students. While 16 LD and 16 NLD students were included in each sample diagnostic information was only available on 14 subjects in each group. For the observation portion of the study, however, only 14 LD and 14 NLD students were included due to scheduling constraints.

LD Student Sample. The LD student sample was selected from those students identified by the cooperating school district as learning disabled within the junior high school. At the time of the study, each student was receiving services in a learning disabilities program. Parents of the participating LD students signed an informed consent statement which described the nature of the research and the extent of their child's participation. The 14 male subjects in the study ranged in age from 12.8 to 15.12 years ($\bar{x}$ = 13.12). Seven students were seventh graders, two were eighth graders, and five were ninth graders. Scores on a group administered IQ test ranged from 70 to 95 ($\bar{x}$ = 87.4). Reading comprehension grade level scores on a group administered test ranged from 3.0 to 7.6 ($\bar{x}$ = 4.86); math scores from 3.0 to 7.6 ($\bar{x}$ = 5.56); and language scores from 3.0 to 7.2 ($\bar{x}$ = 4.34).

NLD Student Sample. The NLD sample contained 16 male students. These students were selected by examining the alphabetical rosters of the classes containing the LD students and selecting the first student not enrolled in any special education program who matched the targeted LD student in that class on age and sex. This selection procedure yielded a sample that was distributed identically to the LD sample across the grade levels. The 14 male students in this study ranged in age from 12.6 to 16.1 years ($\bar{x}$ = 14.3). Seven students were seventh graders, three were eighth graders, and four were ninth graders. Scores on a group administered IQ test ranged from 75 to 121 ($\bar{x}$ = 99.14). Reading comprehension grade level scores ranged from 4.2 to 12.3 ($\bar{x}$ = 8.35); math scores from 4.2 to 12.6 ($\bar{x}$ = 8.2); and language scores from 3.0 to 12.9 ($\bar{x}$ = 7.57).

Teacher Sample. The teachers were selected by examining the regular class schedules of the LD students. Only teachers of purely academic subjects (i.e., math, science, reading, English) were considered for participation. Because the label of learning disabilities is given for problems encountered in traditional academic areas, the student's interactions with teachers in these areas were considered the most appropriate for this research. An informed consent statement was given to each teacher explaining our interest in student-teacher interactions and outlining our procedures for recording social interactions that occurred in their classrooms. Ten teachers agreed to participate, two of whom were not included due to scheduling constraints. The eight remaining teachers ranged in age from 23 to 61 years with a mean age of 33.25 years. The teaching experience of these teachers ranged from 1 to 25 years with a mean of 7.75 years experience.

Measurement Systems and Procedures

Two measurement systems were used: (a) a behavioral observational system and (b) the Teacher Approval-Disapproval Scale (TADS), (Whaley & Loney, 1974),

an attitude scale for the students. Each measurement system was administered by a different experimenter to reduce possible experimenter biases.

Observational System

A ten-second interval observation recording system was used to measure the interactions that took place between teachers and targeted students. Observers were positioned at the back or side of the classrooms, whichever afforded the best possible view of the target students and met with teacher approval. Observers did not speak to the students or teachers during data collection.

The students were observed in four-minute blocks, alternating between the LD and NLD student, with a one-minute break between each four-minute block. The data were recorded on an interval basis; if a behavior occurred in an interval, it was recorded. No frequency data with in intervals were recorded. Ideally, at the end of each session there would be 20 minutes of observation of the targeted LD student and 20 minutes of observation of the targeted NLD student. In some sessions, however, the time observed was shorter due to student or teacher absences for part of the session. Twelve pairs of students were observed during two different sessions. Two pairs of students were observed in only one session because the LD students in those two pairs entered into a social skills intervention program that would have made their subsequent behavior unrepresentative. The total amount of time the pairs were observed, excluding the two pairs observed only once, ranged from 23.5 to 44 minutes with a mean of 37.7 minutes. The observers were blind as to which student was the LD student and which was the NLD student in each pair.

Recording equipment. In order to record the student-teacher interactions, a special scoring sheet was devised (see Appendix A). Each scoring sheet allowed the observer to record behaviors for four minutes. Each line on the scoring

sheet was used to observe behaviors in a ten-second interval. The observation sheets were attached to a clipboard equipped with an audio-signalling device which sounded a tone through an earplug, once at the end of each ten seconds and twice at the end of each minute; this allowed synchronization of dual observations for interobserver reliability.

Training of observers. Two observers participated in this study. Each had one practice session in which they read dialogues of interactions and recorded the categories that applied. The observers then listened to an eight-minute tape-recording of staged interactions and used the clipboard apparatus to record the interactions. Finally, each observer practiced recording in the classrooms for nine class periods before data for this study were collected.

Observation code. Before the four-minute interval began, the observers recorded the current classroom activity using a code letter. Any changes in activity that occurred during the four-minute interval were also recorded. Definitions of these categories and those to be described are detailed in Appendix B.

General classroom behavior. One of the following categories was recorded at the beginning of each 10-second interval, depending on which behavior was exhibited at the moment the tone sounded: Disruptive Behavior (D) , Appropriate Behavior (A), or Off-Task Behavior (O).

Student-teacher interactions. Verbal interactions between teacher and student were recorded and rated as either positive or negative or neutral. Student behavior was further broken down into the following categories: seeking recognition; asking for help, information or feedback; answering when called on, and volunteering. Observers also recorded the occurrence of teachers' verbal or non-verbal responses to these student behaviors. Two additional categories of recorded teacher behavior were giving individual help to a student and behavior control.

Observer Reliability

Of the two observers, one was primary observer during the entire study. Reliability observations were made by a second observer in 14 class periods. A weighted reliability score, which is a total ratio found by adding the ratios for each session and then dividing to calculate the reliability percentage, was calculated for each behavioral category (See Table 1 for formulas). The overall weighted reliability score across behavior categories was 69.8%. Reliability scores for each behavior category are listed in Table 1. The lower reliability scores are due, partially, to low rates of occurrence. Also since many of the

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Insert Table 1 about here

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behaviors were verbalizations, it was difficult to hear the behaviors in many instances.

Attitude Questionnaire

The Teacher Approval-Disapproval Scale (TADS) (Whaley & Loney, 1974) was administered to all the students in the classrooms in which the LD and NLD students were paired. The TADS forms completed by students who were not subjects were discarded.

The TADS was originally designed to determine whether or not students could detect changes in the frequency of teacher approval and disapproval produced by an inservice workshop in behavioral teaching methods, and if a more positive classroom atmosphere would favorably affect the students' attitudes (Whaley & Loney, 1974). The TADS consists of simply worded statements to which the student replies: "none of the time," "some of the time," "most of the time," or "all of the time." These responses are given scores of 0, 1, 2, and 3, respectively. The responses provide an estimate of the amount of social and academic approval

and disapproval the student perceives is directed at him/herself and his/her peers by the teacher.

A total of 11 items are individual in nature; that is, they ask the student to estimate the frequency of certain teacher behaviors directed toward himself/herself personally, or the extent to which he/she is or is not happy in the classroom. Each of these 11 items has a counterpart that asks the student to estimate the frequency of the same teacher behaviors directed toward the class as a whole or to assess the happiness of the class. Thus, the mean for an individual reflects the students' estimates of the amount of time that a particular teacher behavior is directed toward themselves as individuals, or the amount of time that they personally feel happy or unhappy. In contrast, the mean for a class item reflects the students' estimate of the amount of time that a particular teacher behavior is directed toward the class as a whole, or their impression of the amount of time that the class as a group feels happy or unhappy (Loney, Whaley-Klahn, & Weissenberger, 1976).

For purposes of this study, the wording of the TADS was changed slightly. Rather than focus on individual classrooms, the focus was changed to the students' perceptions of approval, disapproval, and happiness in all of their classes in general. Rather than ask whether one "teacher likes the way . . .", the wording was changed to "my teachers like the way . . .". This was done for all 23 items (see Appendix C for the modified TADS).

Reliability on the TADS was originally obtained from a sample of 144 boys and 166 girls attending 10 fourth-grade classes. With administration seven days apart, test-retest reliability coefficients were significantly different from 0 at the $p < .001$ level for 21 to 23 items in the male group and 20 to 23 items in the female group. The generalized Spearman-Brown formula was used to obtain test-retest reliabilities of .81 for a hypothetical subtest containing the four

individual approval items, .72 for a subtest containing the four individual disapproval items, and .76 for a subtest containing the three individual student attitude items. The comparable test-retest reliabilities are .77 for class approval items, .56 for class disapproval items, and .62 for class attitude items (Loney et al., 1976).

Administration of the TADS instrument required that the student read and respond to the 23-item questionnaire. Because of the inherent difficulties of giving this type of instrument to LD students--many students would experience difficulty reading the items--the administration procedures were altered for this study. Questions were read and explained to the students by their classroom teachers. Every student in a class in which LD and NLD students were present was given the TADS to avoid singling out target students.

RESULTS

Classroom Observations

No significant differences emerged from ANOVA analyses of the LD and the NLD subject samples across any of the behaviors observed. To assess whether differences occurred as a function of classroom activity, a 2 (group) X 3 (activity) ANOVA was performed for each of the observed behaviors (See Appendix D). The three activities were: (a) independent student work, (b) teacher directed activity, and (c) transition periods. The ANOVA yielded no significant interactions for LD and NLD students, and only one effect for activity. For the latter, a significant main effect emerged for Appropriate Behavior ($F = 6.41$, $p < .01$). Inspection of the cell means suggested that the transition activity

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Insert Tables 2 and 3 about here

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periods were responsible in that more Appropriate Behavior occurred at these

times. This analysis was further supported by the fact that an ANOVA done without including this activity yielded no significant effects.

Finally, a 2 (group) X 2 (teacher sex) ANOVA was performed for each of the observed behaviors in order to uncover possible teacher effects on student behavior. A main effect emerged for teacher sex. More Appropriate Behavior was exhibited in the classrooms of female than male teachers ($F = 6.38$, p .05). There were no significant interactions for the LD and NLD students.

TADS

Two-tailed t-tests were performed on the means of the six derived scores on the TADS. None, however, yielded a significant effect (see Table 4). Because a series of t-tests may produce significant difference scores by chance, a significance level of $p = .01$ was used in these comparisons in order to reduce the possibility of misinterpretation. Reanalysis with a significant level of $p = .05$ also yielded no differences. To further tease out any possible differences between the LD and NLD students, a Mann-Whitney non-parametric test was conducted, but it, too, yielded no significant differences. Finally, a median split tests on the scores showed the LD and NLD students to be evenly distributed about the medians.

Insert Table 4 about here

DISCUSSION

Previous research in the area of LD student-teacher interactions has suggested that LD students have deficiencies in their social skills compared to NLD students. These findings illustrate what are considered to be relatively stable and enduring differences between these populations. A review of the pertinent literature, however, shows that behavioral differences are not always obtained (Bryan, 1974;

Bryan & Wheeler, 1972; Rickey & McKinney, 1978; Schumaker et al., 1980; Skrtic, 1980). Because most of the literature in this area notes significant behavioral differences between LD and NLD students and their interactions with teachers, a replication of the Skrtic and Schumaker et al. studies appeared necessary to substantiate further these findings.

The findings of the present investigation replicated previous findings; no major differences were found between the student-teacher interactions of LD and NLD students. The significant effect that was obtained from the analysis of activity levels may be understood in terms of some problems of the definition of appropriate behavior during the transition period. Because this category included a multitude of acceptable behaviors, the mean score for "appropriate behavior" was higher here than in the other two categories of activities in which appropriate behavior was more tightly specified. The other significant effect--the greater amount of appropriate behavior that was displayed in the female teachers' classes--may be associated with the class size difference. Male teachers had larger classes than female teachers. Followup analyses were not conducted because there were no findings to suggest a distinction between LD and NLD youths. The Teacher Approval-Disapproval Scale (TADS) was extended to the LD subjects to examine its feasibility for evaluating their perceptions of classroom interactions. The results from the TADS did not support the argument that there are social perception differences between LD and NLD students. This would be expected since there were no observable behavioral differences in the ways the LD and NLD students interacted with their teachers.

Several possible reasons may exist to explain why the students in this investigation did not behave as most of the literature suggests. Perhaps the 16 LD students were not representative of the LD population in general. This could be a function of the definition of "learning disabled" used by the particular school,

or used in school systems in which differences are reported. Perhaps the behaviors studied here were poorly selected. Subtle but important differences may not have been detected with the observation code used. A more specific and reliable code may aid in the detection of behavioral differences. Finally, perhaps by adolescence, the LD students have acquired social skill levels comparable to those of their normal peers and there are no actual differences between these two groups. Further investigations along these lines may help indicate whether the distinction between LD and NLD students on social dimensions is more a matter of attribution on the part of adults or whether there are important differences which need amelioration.

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TABLE 1

OBSERVER RELIABILITY SCORES

Categories	
General Classroom Behavior	95*
Appropriate Behavior	94**
Off-Task	55**
Disruptive Behavior	80**
Student Verbal	72**
Recognition	81**
Asking for help	74***
Answering questions	75***
Volunteering Answers	50***
Teacher Response to Verbal Behavior	95*
Student-Teacher Verbal Interactions	73***
Student Positives	0***
Student Negatives	-***
Teacher Positives	40***
Teacher Negatives	0***
Overall Quality-Student	98*
Overall Quality-Teacher	85*
Individual Help	65***
Behavior Control	44***
Activity	91*
I	89**
T	100**
G	100**
D	88**
L	69**
A	-**
No	31**

Calculation Formulas

*Percent Trials

$$\text{Reliability} = \frac{A}{\text{number of trials}} \times 100$$

Where A = Number of times both observers recorded the same category during a given trial.

**Occurrence

$$\text{Reliability} = \frac{A}{A + D} \times 100$$

Where A = Number of times both observers recorded the same category within the same 10-second interval

D = Number of times only one of the observers recorded a given category during a 10-second interval

***Occurence with 10-second Slide

$$\text{Reliability} = \frac{A}{A + D} \times 100$$

Where A = Both observers recorded the same category within the same or an adjacent 10-second interval

D = Only one observer recorded the category within the same or an adjacent 10-second interval.

TABLE 2

Group By Activity

		Means of Activities*			Standard Deviation*			Level of Significance		
		1	2	3	1	2	3	GRP.	ACT.	AG.
ABEH	LD	77.0	82.8	97.8	24.52	18.19	3.49	0.5302	0.0090	0.1178
	NLD	92.2	85.2	95.8	12.66	10.47	7.36			
DBEH	LD	2.0	0.20	0.20	2.55	0.45	0.45	0.3731	0.6525	0.2226
	NLD	0.40	1.40	4.20	0.89	3.13	7.36			
REC	LD	0.32	0.09	0.0	0.52	0.11	0.0	0.5205	0.2838	0.1402
	NLD	0.0	0.22	0.0	0.0	0.28	0.0			
ASK	LD	0.05	0.05	0.03	0.04	0.[illegible]8	0.07	0.3678	0.3323	0.5521
	NLD	0.0	0.07	0.0	0.0	0.11	0.0			
VOL	LD	0.0	0.05	0.08	0.0	0.12	0.18	0.9904	0.1693	0.2692
	NLD	0.0	0.13	0.0	0.0	0.20	0.0			
TEASTU	LD	3.[illegible]0	2.80	12.0	1.10	4.66	17.38	0.2100	0.4207	0.1710
	NLD	0.40	5.00	0.80	0.55	5.34	1.79			
BEH	LD	0.60	0.20	0.0	0.89	0.45	0.0	0.8417	0.6619	0.2618
	NLD	0.20	0.0	0.80	0.45	0.0	1.79			

n = 5

*Activity 1 -- Independent Student Work
Activity 2 -- Teacher Directed Activity
Activity 3 -- Transition Periods

Table 3

Means for Appropriate Behavior Category

		Activity		
		1	2	3
Group	LD	77.0	92.8	97.8
	NLD	92.2	85.2	95.8

TABLE 4

T-Tests for TADS Scores

Derived Scores		Number of Cases	Mean	Standard Deviation	T Value	2-Tail Prob.
1	LD	16	1.25	0.42	0.21	0.834
	NLD	16	1.22	0.42		
2	LD	16	1.28	0.57	0.16	0.875
	NLD	16	1.25	0.55		
3	LD	16	1.30	0.64	1.02	0.317
	NLD	14	1.11	0.29		
4	LD	16	1.19	0.51	0.55	0.586
	NLD	14	1.09	0.46		
5	LD	16	2.37	0.54	-1.32	0.198
	NLD	16	2.60	0.44		
6	LD	16	2.54	0.71	-1.15	0.261
	NLD	16	2.79	0.51		

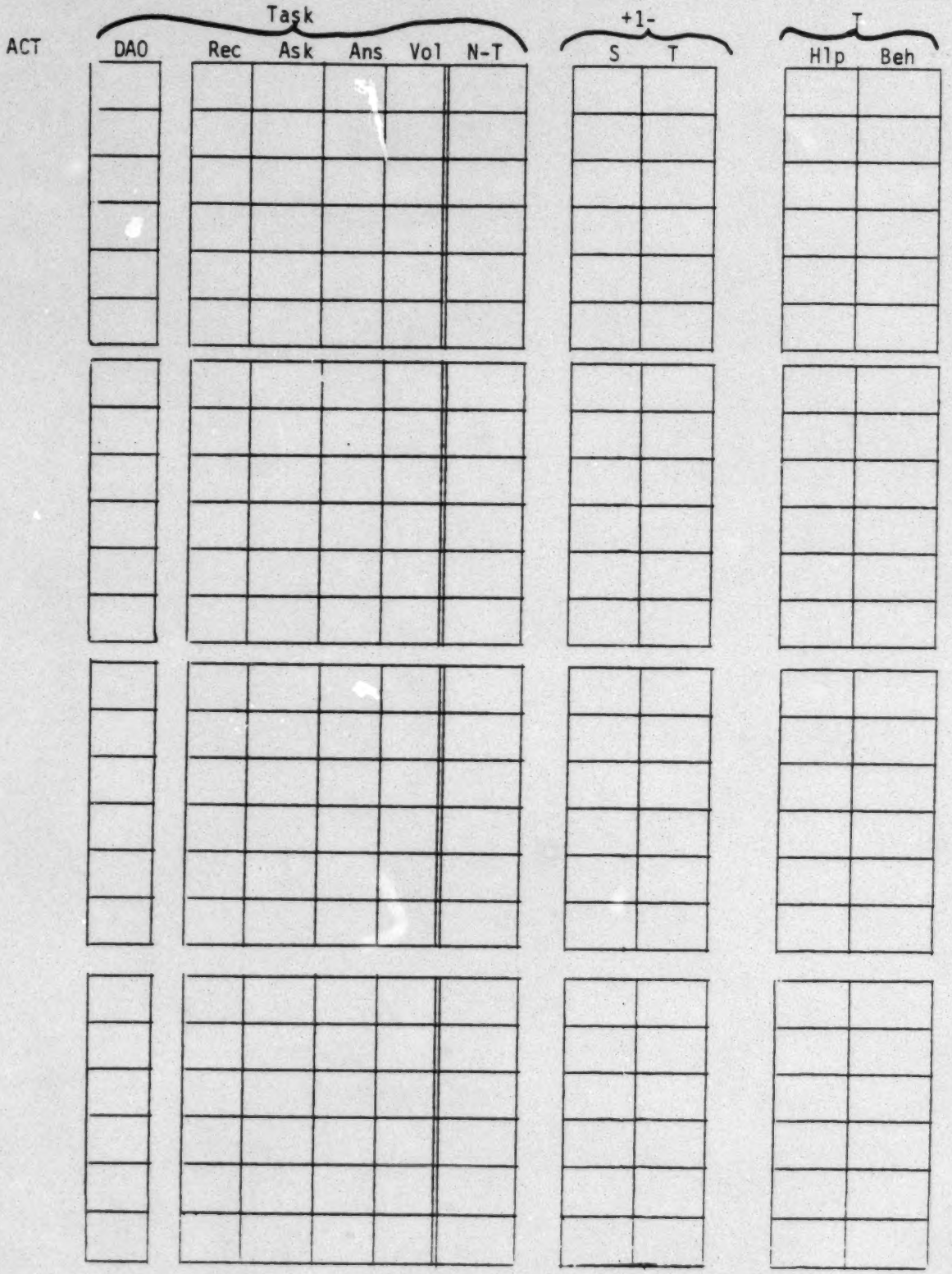
APPENDIX A

Classroom Observation Scoring Sheet

DATA F

Page _____

T_____ Hr_____ S_____ Obs_____ Rel?_____ Date_____



APPENDIX B

Classroom Observation Code and Definitions

Two students will be observed in the following sequence: 4 minutes on Student 1, 1 minute break, 4 minutes on Student 2, 1 minute break, 4 minutes on Student 1, etc. At the end of the session there would be 20 minutes of observation (5 data sheets) on each student.

Classroom Activity

Write the code for current classroom activity in the margin beside the first 10-second interval just before the 4-minute block begins and mark any clear changes in activity that occur during the 4-minute period. Select the code that best describes the activity the teacher has asked the target student to follow -- whether or not the student actually does so. (Enter the code in the left-hand margin opposite the interval in which the activity first appears.)

T Test - The student is to work individually on a test or quiz.

I Individual Work - The student is to work on any individual assignment except a test. Sometimes a student may work with peers during this time; however, it is distinguished from group work by the fact that the teacher has not actually instructed students to work in groups.

G Group Work - The student is to work with a group of students on a common project.

D Discussion - The teacher works with the class as a whole and encourages class participation. The teacher may either call on students to answer specific questions or may ask students to volunteer answers or comments.

L Lecture/demonstration - A person (usually the teacher) lectures or demonstrates a task to the class and does not seek responses from students. This would include times when the class (including the target) watches a few students work problems on the board.

A Audio/visual Presentation - Students are to attend to films, slides, or recordings that do not involve continuous teacher participation. If the teacher provides a running commentary for visual materials such as slides, record the activity as "D" or "L" -- whichever is most appropriate.

No No Activity - The teacher has not provided an identifiable activity for the class. This will usually occur near the beginning or the end of class periods or during periods of transition between tasks. Note: Listen carefully to teachers' instructions about what students are to do when they finish individual work or tests. Record "No" if a student finished such work, turned it in, and no activity has been specified by the teacher. (Do not begin recording "No" unless the student has actually turned something in or there is some clear sign that the works is actually finished.)

O Other - This includes any activity that does not fit the categories described above. After the session, briefly describe the activity on the back of the data sheet.

General Classroom Behavior

Record either "D", "A", or "O" at the beginning of each 10-second interval. If more than one category seems to apply during a given interval, record the one that appears first below. Record at the moment you hear the beep.

D Disruptive - The student engages in distracting, noisy, very active, or potentially desctructive behavior at any time during the 10-second interval. A student's behavior would not be disruptive if the teacher has given explicit permission for it or if it is an integral part of the current classroom activity arranged by the teacher (e.g., singing is not disruptive when the teacher is leading the class in song). Your decision should be based on observable features of the student's behavior, not on whether or not it seems to be bothering teacher or peers.

Examples:

1) Noisy and/or destructive use of inanimate objects (e.g, hitting desk, kicking, tapping pencils loudly, throwing things, etc.)
2) Very active out of seat behavior (e.g., running, jumping)
3) Loud inappropriate vocalizations (loud comments, whistling, singing)
4) Disruptive interaction with peers (e.g., fighting, yelling, talking in voices that can be heard throughout the room, stealing, communicating with peers that are not at adjacent desks).

A Appropriate - The student:

1) is not disruptive
2) is in seat with seat behind desk
3) is performing behavior specifically instructed by the teacher or behavior appropriate to the current activity:
   (a) T and I - visual attention to materials relevant to the assigned task (book, notebook, examples on chalkboard)
   (b) G - Participation with the group on the assignment
   (c) D and L - visual attention to the speaker or verbal participation in discussion
   (d) A - visual attention to the presentation
   (e) No - in seat
   (f) O - make a decision based on similarity to the activities listed above.

Deviations from these criteria may be recorded as appropriate if the student behavior facilitates task performance or if the teacher has granted explicit permission for it (e.g., sharpening a pencil, looking up a word in the dictionary, discussing an assignment with a peer).

O Off-Task - The student is not engaged in either disruptive or appropriate behavior.

X Unable to observe - If you are not able to see the student well enough to record "D", "A", or "O", place an "X" in the column (and try to move so that you can see).

Specific Categories for Teacher-Student Interaction

Student

The five behavior categories described below are to be used only when the teacher is not giving the target student individual help (individual help = work on a task in proximity on a one-to-one basis). Enter a checkmark each time they occur during a 10-second interval. Circle the checkmark if the teacher responds to the student's behavior in the manner described for each category.

These categories are primarily concerned with the beginning of a student-teacher exchange. If they continue to discuss the correctness or appropriateness of a given question or answer, the continuing interaction would not be recorded in terms of these five categories.

Rec Seeking Recognition - The target student seeks the teacher's recognition by raising a hand, calling the teacher's name, asking to be recognized, asking for permission to make a comment, or approaching the teacher and waiting to be recognized. If the student immediately makes a more extensive comment -- which goes beyond merely asking to be recognized, do not check this category.

Teacher - Circle the checkmark to indicate teacher response if the teacher makes an affirmative response to the student's bid for recognition (e.g., allows students to speak, goes to student's desk to see if there is a problem, says "I'll be with you in just a second."). If the teacher ignores or refuses to acknowledge the student, don't circle the checkmark.

Ask Asking for Help, Information or Feedback - The student asks the teacher for task-relevant information or feedback or for help with a task. Record this category whenever the student is requesting a verbal response from the teacher, even if the student's question is actually a response to a question posed by the teacher. For example:

T: What do we do next?
S: Do we multiply by 2? (This would be recorded as "Ask")

If the student raised a hand, waited to be recognized, then asked a question, both "Rec" and "Ask" would be checked. Do not include questions that are not relevant to the subject matter of the current classroom activity (e.g., "Can I go to the library?" "Will we have a test tomorrow?" "Can I chew gum now?").

Teacher - Circle the checkmark if the teacher answers the student's question or provides the requested help or feedback. Do not circle it if the teacher ignores the student, refuses to answer the question, or refuses to help the student.

Ans Answer when called on - The target student answers a task-relevant question directed specifically to him by the teacher (e.g., "Joe, what is the answer to No. 3?"). Saying "I don't know" would not be an answer.

Teacher - The teacher provides a verbal or nonverbal response (positive, negative, or neutral) to the student's answer (e.g., "Yeh, that's right" "Could you explain that a little more?" "Mmhmm" "Are you sure about that?" repeats the student's answer, shakes head in disagreement). The check would not be circled if the teacher ignores the student or continues to talk on the subject without acknowledging the student's contribution. If you are uncertain about whether a particular comment is actually a response to the student, use teacher's visual attention to the student as a basis for borderline decisions.

Vol Volunteering - The student answers a task-relevant question directed to the class as a whole or provides task-relevant information without being asked. The answer would be voluntary as long as the student -- and not the teacher -- initiated it. In the following example, both "Rec" and "Vol" would be checked:

T: Who can tell me the answer to this problem?
(Target student raises his hand.)
T: What is it Joe?
S: It's two thirds.

(The student's response is "Vol" rather than "Ans" because the student initially volunteered to provide it.)

Teacher - The teacher provides a verbal or nonverbal response (positive, negative, or neutral) to the student's answer.

N-T Enter a checkmark in this column when there is any verbal interaction between T and S during the interval.

Qualitative Categories

Check the following qualitative categories if relevant behavior occurs at any time during the observation (whether or not the teacher and student are working together). These categories may or may not occur in conjunction with those listed in other portions of the code. Record "+" or "-" under the "S" column to describe student behavior toward the teacher; use the "T" column to describe teacher behavior toward the target student.

\+ Positive Response - Record "+" when student or teacher behavior fits either of the following criteria:

1) Praise or positive evaluation of the other person, their behavior, or their work. (Does not include merely repeating what the other person said.)
2) Thanking the other person.
3) Positive physical contact (e.g., pat on the back).

Do not record "+" if positive content is said sarcastically or if positive features occur simultaneously with negative ones (e.g., "I know you can do better than this.").

- Negative Response - Enter a "-" if any student or teacher behavior fits either of the following criteria:

  1) Threats, profane remarks, argument, sarcasm, or criticism directed toward the other person.
  2) Gestures of actions that communicate anger or disgust toward the other person (e.g., slamming books down on the desk in response to the other person's comment)
  3) Negative tone of voice, yelling, mimicking
  4) Aversive physical contact (e.g., pushing, shoving)

  Do not score an action as negative if you are certain that it constitutes good-natured joking. (Note: Every case of behavior control would not necessarily be negative.)

Teacher

Check the following categories if they occur at any time during an interval.

Help Individual Help: - The teacher does one of the following:

1) Offers to give the student individual help with a task. Offers to help may be identified by: (a) explicit reference to help or assistance (Would you like me to help you with that?); and (b) physical approach to the student with questions about the student's progress on the task (e.g., The teacher walks to the student's desk and asks if there are any problems).
2) Gives the student individual help with a task (individual help = work together on a task in proximity on a one-to-one basis). Continue to check this category as long as the teacher is helping the target student.

Beh Behavior Control - The teacher directs the target student to correct a non-academic aspect of his current behavior in the classroom. (The student has been exhibiting behavior that the teacher does not find acceptable.) For example, the teacher may ask the student to:

1) Refrain from a disruptive or annoying behavior (e.g., "Stop that right now." "No talking." "Ged rid of your gum please.")
2) Pay attention or get to work on a task (e.g., "Please turn around in your seat and keep up with us in the book.")

Unable to Observe

Write the following information to indicate when either the teacher or target student cannot be adequately observed:

Inability to hear or see subjects - When you cannot hear or see the target student well enough to record accurately, place a horizontal line across the student section of that interval on the data sheet. Put a line across the teacher section if the teacher cannot be adequately observed.

Out of the classroom - Write "out" across the teacher and/or student sections if one or both leave the room. Do not switch to another student if the target student leaves (except for the scheduled switches to the second student targeted for that observation session). Continue to record "out" for the target as long as he is out of the room.